RESTRICTED CIRCULATION

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Sheep PGE forecasting - simple model

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For any operational system, use has to be made of data that are readily available. For this reason 6 stations have been selected to represent the sheep areas of England, for which water balance estimations are made on a routine basis. These are

North England	-	Cockle Park (now Boulmer)	Weighting 2
Yorks & Lancs	-	Ilkley	Weighting 2
West Midlands	-	Shawbury	Weighting 2
South West	-	Exeter	Weighting 2
East Midlands & East	-	Cranwell	Weighting 1
South East	-	East Malling	Weighting 1

The simplest model for a forecast at the end of July involves weighted values of return date the previous autumn(RD) (with a maximum of 10) and May to July rainfall (R).

The formula for the years 1954 - 1969 was found to be

Disease rating on a scale of 1-8

$= 0.6RD + 0.68R - 4.18$

with a multiple correlation of 0.84

and partials 0.80 and 0.65

Results

Year	Disease Rating		Forecast	
	Actual	Estimate		
1954	6	6.6	High	Correct
1955	1	2.7	Below Average	Near Miss
1956	6	6.1	High	Correct
1957	3	1.2	Low	Near Miss
1958	7	6.1	High	Correct
1959	1	0	Low	Correct
1960	8	6.1	High	Correct
1961	1	1.3	Low	Correct
1962	3	4.0	Below Average	Correct
1963	5	4.5	Above Average	Correct
1964	2	3.7	Below Average	Near Miss
1965	7	6.7	High	Correct
1966	5	3.1	Below Average	Incorrect
1967	2	3.4	Below Average	Near Miss
1968	5	4.4	Above Average	Near Miss
1969	1	3.2	Below Average	Incorrect
1970	1	4.0	Below Average	Incorrect
1971	3	5.3	Above Average	Incorrect
1972	4	6.5	High	Incoreect
1973	5	7.2	High	Incorrect
1974	6	4.7	Above Average	Near Miss

The independent checks are far from satisfactory, and some improvement is necessary.

Any comments or suggestions on this paper should be referred to the author.

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